UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,823	02/11/2002	Densen Cao	5061.18 P	4206

7590 10/04/2004

Parsons, Behle & Latimer
201 South Main Street, Suite 1800
P.O. Box 45898
Salt Lake City, UT 84145-0898

EXAMINER	
LEWIS, RALPH A	

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 10/04/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,823	CAO, DENSEN	
	Examiner	Art Unit	
	Ralph A. Lewis	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-19 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 11 February 2002 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4, 5.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Misnumbered Claims Renumbered

The originally filed claims skipped claim from claim 6 to claim 8 leaving out claim 7. The originally numbered claims 8-20 have been renumbered 7-19, respectively, and are hereinafter referred to by their new numbers. Applicant should make sure that the dependencies of the renumbered claims are correct.

Rejections based on 35 U.S.C. 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 6-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 1, there is no antecedent basis for "said average power output level."

In claim 6, line 4, "said want"? In line 11, "light to be output from the curing"?

In claim 13, line 4, "said want"?

Rejections based on Obvious-type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1- 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-36 of U.S. Patent No. 6,331,111,
claims 1-20 of U.S. Patent No. 6,719,559,
claims 1-11 of U.S. Patent No. 6,755,648,
claims 1-20 of U.S. Patent No. 6,755,649,
claims 1-20 of U.S. Patent No. 6,780,010, and
claims 1-20 of U.S. Patent No. 6,783,362.

Merely providing for different versions of the same claimed subject matter by varying the order of the limitations and setting them forth in varying degrees of scope is a matter of claim construction and would have been obvious to one of ordinary skill in the art.

Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-24 of copending Application No. 10/016,992,
claims 25-33 of copending Application No. 10/017,454,
claims 1-5, 7-11, 13-22, 24 of copending Application No. 10/017,455,
claims 1-17 of copending Application No. 10/017,847,
claims 1-18 of copending Application No. 10/072,302,
claims 1-18 of copending Application No. 10/072,462,
claims 1-18 of copending Application No. 10/072,613,
claims 1-19 of copending Application No. 10/072,635,
claims 1-20 of copending Application No. 10/072,659,

claims 1-23 of copending Application No. 10/072,826,
claims 18-31 of copending Application No. 10/072,831,
claims 1-20 of copending Application No. 10/072,850,
claims 1-20 of copending Application No. 10/072,852,
claims 1-17 of copending Application No. 10/073,858,
claims 1-20 of copending Application No. 10/073,672,
claims 1-20 of copending Application No. 10/073,819,
claims 1-8, 10-20 of copending Application No. 10/073,822,
claims 1-20 of copending Application No. 10/188,449,
claims 1-60 of copending Application No. 10/188,520,
claims 1-27 of copending Application No. 10/189,224,
claims 1-37 of copending Application No. 10/189,233,
claims 1-35 of copending Application No. 10/189,255,
claims 1-20 of copending Application No. 10/189,307, and
claims 1-39 of copending Application No. 10/189,323.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application are obvious variations of those already set forth in the above applications. Merely providing for different versions of the same claimed subject matter by varying the order of the limitations and setting them forth in varying degrees of scope is a matter of claim construction and would have been obvious to one of ordinary skill in the art.

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6, 8-10, 12-14 and 16-18 are rejected under 35 U.S.C. 102(a) as being anticipated by Mills (WO 99/16136).

Mills discloses a method of curing dental material with a curing light wherein the dental curing light (page 1, second paragraph) is comprised of a hand held wand (Figure 5) having an elongated heat sink 45, 50, 51, having a distal end surface serving as a mounting platform on which primary heat sink 48 is mounted, and covered light emitting semiconductors 43 mounted to the primary heat sink. The Mills curing light may be operated in a pulsed mode (see page 16). For the LEDs to pulsed it is inherent that they be operated with pulsed current. In regard to claims 13 and 18, note light guide 47 which angles the light with respect to the longitudinal axis of elongated heat sink 45.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136) in view of Doiron et al (5,698,866).

Mills discloses a method of curing dental material with a curing light wherein the dental curing light (page 1, second paragraph) is comprised of a hand held wand

(Figure 5) having an elongated heat sink 45, 50, 51, having a distal end surface serving as a mounting platform on which primary heat sink 48 is mounted, and covered light emitting semiconductors 43 mounted to the primary heat sink. The Mills curing light may be operated in a pulsed mode (see page 16). For the LEDs to pulsed it is inherent that they be operated with pulsed current In Mills the LEDs are mounted directly on a flat heat sink 48. Doiron et al, however, teach that an improvement over mounting diodes on a flat surface (Figures 9 and 10) is mounting them in a well (Figures 11 and 12) formed on the heat sink so that more light from the LEDs is reflected forward in the desired direction. To have mounted the Mills LEDs in wells as taught by Doiron et al so that more light is reflected forward in the desired direction would have been obvious to one of ordinary skill in the art.

Claims 7, 11, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136).

In regard to claims 7 and 15, Mills indicates that the light may be in a "modulated mode" (page 16) which seems to suggest pulsed continuous light. In regard to claim 11, the operation of the Mills device within the wide range of current values claimed would have been obvious to one of ordinary skill in the art as a matter of routine. In regard to claim 19, the Mills light guide directs the light from the wand in figure 5 at an angle of approximately 45 degrees, merely varying that angle to 90 degrees so that the light may be directed to a particular hard to reach area of a patient's mouth would have been obvious to one of ordinary skill in the art.

Prior Art

Applicant's information disclosure statements of February 11, 2002 and August 08, 2002 have been considered initialed copies enclosed herewith.

Adam et al (6,419,483 B1), Boutoussov et al (US 6,439,888 B1), Melikechi et al ((US 6,511,317), Hooker et al (US 6,554,463), Fregoso (US 6,611,110 B1), Logan et al (US 6,692,251) and Bianchetti et al (EP 1 090 607 A1) are made of record.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(703) 308-0770.** Fax (703) 872-9302. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (703) 308-2582.

R.Lewis
September 24, 2004

Ralph A. Lewis
Primary Examiner
AU3732